



The Minuteman Repeater Association

The Minuteman

Volume 32, Number 5

May 2003



President's Corner by Kevin Paetzold, K1KWP

The MMRA will have a general membership meeting on Wednesday May 21 at 7:00PM at the Campion Center. This meeting is scheduled to begin 30 minutes earlier than usual because it is also the annual meeting where elections of officers will take place and because of the presentation that we will have at that meeting.

MMRA member John Houghton, KB1IYK, is a certified Red Cross instructor and has offered to give a "Till Help Arrives" talk at the MMRA May meeting. This talk is about what an untrained person could and should do in a medical emergency.

In addition John has also offered to teach the 12 hour Red Cross "Community First Aid and Safety" class which includes adult, child, and infant CPR, First Aid, and use of an AED (Automatic External Defibrillator) to the MMRA sometime over this summer. More details on this fantastic opportunity will be available at the May meeting (and will also be announced on the mmra@yahoogroups.com email list and on the www.mmra.org web page). Exact scheduling and location of this class will not be decided until we better understand the interest in this opportunity.

As announced in the previous newsletter the MMRA has acquired the 147.270 repeater in Marlborough. As you probably know this repeater is part time linked to the W1OJ ten meter repeater. User codes to enable and disable the link are being made available to members who request them from the Secretary, K1IW. These codes will be mailed out to all members as part of the renewal process that will begin in September. At this time the ten meter repeater is automatically linked in from 10AM to 4PM on weekdays and 9AM to 7PM on weekends. If you hear the double courtesy beep it is linked.

I was very happy to see that several of the MMRA repeaters were used during the Boston Marathon. I was also happy to see that some MMRA repeaters are scheduled to used during the Walk-for-Hunger event. I believe that supporting these kinds of events with repeater and communication resources is one of the primary purposes of the MMRA.

I was also very happy to see many MMRA members working at the marathon. I work several different public service events every year and every year I meet some MMRA mem-

bers at these events who I had not met before. There are also some MMRA members that I regularly see at these events who it was also nice to talk to again.

On April 23rd we had a meeting of the MMRA board. This was the last board meeting of the current membership year (just as the upcoming meeting on May 21 will be last general meeting until September). I believe that in summary we had a pretty good year. The MMRA system remains technically healthy and all the repeaters seem to be operating well at this writing. Of course this is due to a great deal of work mostly from W1BRI.

Although we continue to have a decreasing number of memberships year over year and we acquired the 147.270 repeater, we were able to end the year in the black due to continued cost savings. It is unlikely that we will do so well financially next year. Even if there are no other surprise expenditures there are still almost certainly going to be some significant costs at the site of the Slygo shelter in the next year which we can not really predict at this time. Stay tuned to the weekly net, the website or the mmra@yahoogroups.com email list for updates on this situation and potential work parties related to it.

At the April 23 board meeting we attempted to determine a nomination slate for the upcoming election but were unable to completely do so. One office that does not currently have a nominee is President. Hopefully this is a situation that we will be able to resolve at the May meeting.

I have been reluctant to accept the nomination for President for a third term because I believe that although term limits should not be mandatory they are a good idea. I think it would be good for the MMRA to have a new face representing the club in various forums.

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About the Minuteman Repeater Association

The Minuteman Repeater Association (MMRA) is dedicated to Amateur Radio and public service. The MMRA has built a large system of repeaters in Eastern Massachusetts.

The MMRA meets on the 3rd Wednesday of September, November, January, March, and May. Meetings start at 7:30 PM in the Campion Center in Weston MA. Meetings are open to all interested parties. Talk-in is available on the Weston 2-meter repeater (146.82).

The Minuteman newsletter is mailed one week before each meeting. Members are encouraged to submit articles. Articles may be sent to the editor via email to n1be@arrl.net. The deadline for articles is the last Friday of the month preceding the meeting.

Each Tuesday evening at 8PM the MMRA links all the repeaters for an open net. The topic is "Technical Information and Other Stuff". Feel free to join us.

Membership in the MMRA is open to all radio amateurs. Annual dues are \$25 per individual or \$35 per family. The membership year starts on Sept 1st. Dues for new members are prorated for the remainder of the year. See our web-site for details.

Email to the club leadership should be sent to mmra@mmra.org. The MMRA web site is: <http://www.mmra.org/>

An email distribution list for club members has been established on: <http://www.yahogroups.com/> — the name of the group is "MMRA".

Repeater and Frequency Information

Location	MHz	PL	Call	Note
Marlboro	53.810	71.9	W1BRI	PTL
Marlboro	146.610	146.2	N1BHI	FTL
Quincy	146.670	146.2	W1BRI	PTL
Stoneham	146.715	146.2	N1NVL	PTL
Weston	146.820	146.2	WZ0C	PTL
Brookline	146.985	88.5	W1FCC	Affiliated, PTL
Marlboro	147.270	146.2	W1MRA	PTL (to 10 Meters)
Hopkinton	223.940	103.5	N1BHI	FTL
Quincy	224.400	103.5	N1KUG	FTL
Weston	224.700	103.5	N1HBR	FTL
Stoneham	446.725	88.5	N1NVK	NA
Brookline	447.875	88.5	K1IW	Affiliated, PTL
Shrewsbury	449.575	88.5	W1BRI	FTL
Marlboro	449.925	88.5	W1MRA	Network Hub
Marlboro	144.390	none	N1QPR-2	APRS Digipeater
Marlboro	145.030	none	W1MRA-3	KA-node Digipeater
?	145.630	146.2	W1MRA	Fox Box

Notes: FTL = Full Time Linked to the Hub.
PTL = Part Time Linked (on demand).
NA = linking is Not Available.

PL: PL is now required on 2 meters to prevent interference.
The code **750** will temporarily disable the PL requirement.

Using the Autopatch: Only the hub has a telephone line.
(1) Link to the hub if necessary.
(2) Then bring up the patch using the 449.925 autopatch codes.

Control codes are sent to members upon receipt of dues.

MMRA Leaders

President	Kevin Paetzold	K1KWP
Vice President	Bob Evans	N1BE
Secretary	Bob DeMattia	K1IW
Treasurer	Bill Northup	N1QPR
Clerk	Jon Titus	KZ1G
Technical Officer	Bryan Cerqua	W1BRI
Director	Larry Banks	W1DYJ

Director	Shelley Northup	N1VJE
Director	Steve Schwarm	W3EVE
Director	Bill Thorpe	WA1NLR
Emergency Coordinator	Bill Northup	N1QPR
Public Service Coordinator	Kevin Paetzold	K1KWP
Newsletter Editor	Bob Evans	N1BE
VEC Liaison	Bill Wade	K1IJ
Web Page Editor	Bob DeMattia	K1IW

President's Corner (cont.)

(Continued from page 1)

A new President with fresh ideas might be more effective with issues such as reversing the membership decline and increasing the involvement of the membership in general. The overall trend is about 10% membership loss each year.

In addition I am concerned about the potential of burnout in the current elected and appointed office holders. Although we received some new officers last year we need more. We need additional members to step up to the plate and either share or start preparing to share the workload to keep the MMRA and its system running. It seems that I make a comment like this in every newsletter issue.

In closing I would like to express my thanks and appreciation on behalf of all the members of the MMRA to those who helped with various tasks and at various work parties during the past year. I also want to explicitly thank the officers, directors, net controls, web masters, newsletter editor, newsletter contributors, and everyone else who helped behind the scenes this year.

I hope to see you at the May meeting and I hope that everyone has a good summer.

Adopt An MMRA Web Page

Have you visited the MMRA website recently? It has a new look, but it has still the old content. We are looking for people to adopt various pages on the site. As an adopter, you will provide the content for the page of your choice.

The web site will now follow the same model as our newsletter. Contributors will send their content to the web page editor, who will fix the presentation so that the web site looks consistent, then publish it.

Depending on the page you choose, updates may be needed anywhere from weekly to very infrequently.

All that is needed from you is a ham radio interest that you like to write about. No web page experience is needed!

The main sections of the website are listed below. Some have been adopted already. If you see a section, that you'd like to adopt, send an email to Bob DeMattia, K1IW, web page editor: k1iw@arri.net. You are not limited to what is below! If you think there is something that should be on our website, please send your idea to K1IW. *[K1IW, is the new MMRA Web Page Editor — Ed.]*

- Officer list
- Directions to meetings
- Dues info

Board Meeting Notes

The MMRA had a business meeting on April 23rd. Attendees were Kevin Paetzold, K1KWP, Bob Evans, N1BE, Jon Titus, KZ1G, Bryan Cerqua, W1BRI, Bill Thorpe, WA1NLR, Bob DeMattia, K1IW, Shelley Northup, N1VJE and Bill Northup, N1QPR.

The following items were discussed:

- 147.270 repeater plans and policies,
- Changes to the website and looking for people to assist K1IW with adding content.
- The upcoming election at May meeting, We need more members to step up and help share the load of keeping the MMRA and the system running.
- Next meeting and Red Cross first aid training which may be made available to the MMRA.
- Slygo - We will probably have to do something with the Slygo shelter before long. It is possible our hand may even be forced with this.
- Club finances.
- Disposition of some club owned property at Weston and at the homes of WA1NLR and W1BRI.
- A critique of Boston Marathon communications.

Correction

The name of N1PUI, who attended the February MMRA board meeting, was incorrectly listed. Her name is Scotti Goldberg.

- How to join info
- Bylaws
- Club news
- Pages on specific club events
- Foxhunts (main page, hunt list, box report)
- Operator's guide
- VE exam info
- Newsletters (adopted by N1BE)
- Shrewsbury repeater (adopted by W1BRI)
- Marlborough east repeater (adopted by W1BRI)
- Marlborough west repeater (adopted by W1BRI)
- Weston repeater (adopted by W1BRI)
- Hopkinton repeater (adopted by W1BRI)
- Quincy repeater (adopted by W1BRI)
- Stoneham repeater (adopted by W1BRI)

Repeater Report by Bryan Cerqua, W1BRI

Quincy 146.67 & 224.40: On April 5th Wayne, N1XXI and I visited the Quincy to install duplexers donated by Bob, K1IW. The duplexers were previously tuned at my work and have been waiting for installation for about 2 months. A power amplifier donated by Bill Dunn, N1KUG was also to be installed. The power amp was modified to turn on a four-inch fan every time the PA is active. Once all the 220 components were connected the system was fired up and tested. The Hamtronics 10W pre-driver amp had to be turned down to not over-drive the PA. The PA is rated for 60 watts but not for repeater service so it was decided to run the PA at 45 watts. The 220 repeater seemed to work fine, a quick de-sense test was done using the service monitor and it sounded OK.



N1KUG's 220 MHz PA installed at Quincy

While at the site I noticed the 3/8" hardline that connects the antenna to the 146.67 repeater got kinked and needed to be fixed. Since the hardline connector was in bad shape I decided to put a 2 piece N type connector on it, this took some time because the hardline had to be filed to fit the connector.

Another reason to visit Quincy was to investigate an interference problem keeping '67 keyed up. Using the spectrum analyzer on the service monitor it was quickly seen that the '67 power amplifier had huge spurs on either side of the carrier. Rather than try to fix the power amp at the site it was removed taken home. Once it was fired up on my workbench, I used a plastic poking stick and found some cold solder joints that caused the spurs to come and go. I re-soldered the PA in that area and the spurs disappeared. Using my hair dryer I gave it the bake test and it passed.

During the first week of the 224.40 repeater operation using the new PA and duplexers I noticed that occasionally on key up it would make a buzzing noise. I suspected things might not have been adjusted properly between the pre-driver amp and the PA.

The following rainy weekend Roger, WA1NVC, and I drove to Quincy to re-install the power amp. The '67 PA was installed in just a few minutes and power output set to 50 watts. Now that the two-meter system was playing we took a look at the 220 TX output using the spectrum analyzer. We could see spurs dancing around all over the place. Careful re-



Quincy 220 MHz with duplexers from K1IW

tuning of the pre-driver removed the spurs. This was a good find and fixing it should make the 220 system play that much better.

The relays in the audio interface box were re-wired to separate logic outputs to prevent the '67 RX audio from being heard on the on the 220 repeater when the 220 link to 449.925 is up. I small patch to the SCOM 7K code was done to control the relays. The link was brought up and the solution to this problem was verified. Some of the audio levels were also adjusted since we had the service monitor.

Another visit to Quincy is planned to look at why the two-meter repeater is not hearing as well as previously. Maybe it's the N connector I put on the hardline or perhaps something else. Hopefully it will be easy to find.

The Brookline Repeaters by Bob DeMattia, K1IW

A relatively new addition to the MMRA network is a pair of affiliated repeaters located in Brookline, Mass. The repeaters are not owned directly by MMRA, but can be linked into the MMRA system. They are open to all amateur radio operators.

The Brookline repeater site consists of three repeaters, two of which can link into MMRA. Each of the repeaters may require a PL tone to access, as shown in the following table:

Callsign	TX Freq	Output Power	RX Frequency	PL Requirement	Link Status
W1FCC	146.985	100W / 8W	146.385	88.5 Tx (always) 88.5 Rx (selectable)	Part-Time Link
K1IW	224.880	60W / 10W	223.280	103.5 Tx (always) 103.5 Rx (selectable)	Not Linkable
K1IW	447.875	35W	442.875	88.5 Tx (always) 88.5 Rx (always)	Full-Time Link

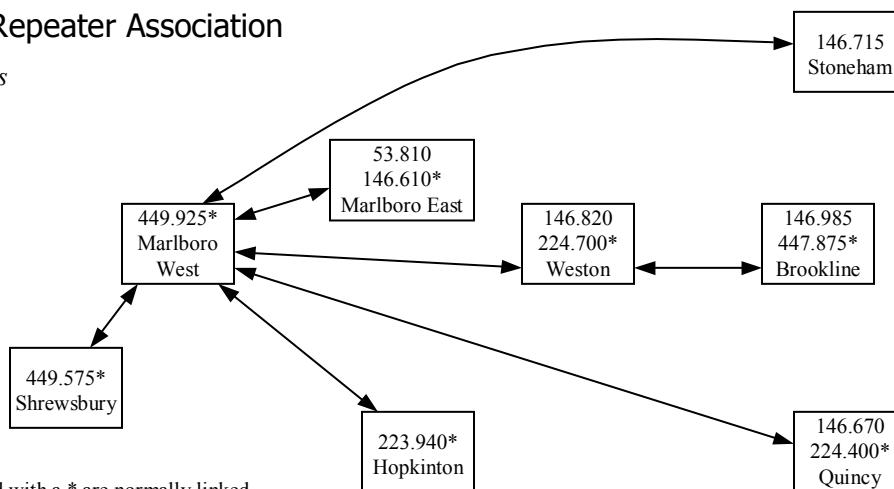
The three repeaters may all be linked by a Brookline control operator to each other or to the MMRA link, in almost every combination. To find out the current link state, enter "54" on your DTMF pad on any of the Brookline repeaters,

then release PTT. You will get a voice message explaining the current status.

The diagram below illustrates how the Brookline repeaters fit into the MMRA network.

Minuteman Repeater Association

Linked Repeaters



Frequencies indicated with a * are normally linked

Other frequencies may be linked by MMRA members or control operators

Both the 2m and 440 Brookline repeaters may be connected or disconnected from the MMRA network by users with the proper command codes. A connection or disconnection made by a user will revert back to its previous state after five minutes of repeater inactivity. Only a control operator may change a link state permanently.

All MMRA members are encouraged to try the Brookline repeaters. The '985 repeater has excellent mobile coverage out to I-495, with solid HT coverage within route 128. The '875 machine mobile coverage is good within route 128, with solid HT coverage for Boston, Brookline, and Newton.

Brookline user control codes

	On	Off
2m Link	6981	6980
440 Link	7871	7870

K1USN Needs Your Help by John Cunningham, W1AI

The K1USN radio club is doing a great thing! Each year we introduce amateur radio to approximately 4,000 scouts as part of their Overnight Adventure on the USS Salem museum ship in Quincy, MA. The scout groups each receive a 30-minute presentation introducing them to amateur radio and Morse code, followed by a 30-minute hands-on radio demonstration, allowing them to talk on-the-air to hams via HF and/or 2M/IRLP. In the typical weekend (about 40 weekends per year), we do this for 6 different groups of scouts, typically reaching a total of 100 or more scouts. Who knows how many of the seeds we sow will eventually sprout into the next generation of hams?

Unfortunately — as is too often the case — the bulk of the work tends to fall on the shoulders of a handful of individuals. While the work is enjoyable and gives us a tremendous sense of accomplishment, the unrelenting requirement to give up every single Saturday leads to stress and burnout. We need to spread the load!

I ask for your help to change this situation.

First, I ask that the various clubs in the area make a commitment to help us out. Clubs on the South Shore might commit to providing us with 2-3 volunteers, one weekend each month. Clubs further away might commit to sending us 2-3 volunteers, one weekend out of every 2 months. (They could carpool, reducing the cost and boredom of travel.) The scout groups come from a wide area, from New York to Maine. It's not unreasonable to ask a volunteer to travel an hour or more once every couple of months.

Second, I send messages requesting volunteers each week to a list of 85 area hams. I would like to expand this list to include more people who may be interested in volunteering to help on occasion. Please forward this message to hams in your local area. Anyone interested volunteering for this valuable project should send a message to W1AI@hamtestonline.com requesting to be added to the USS Salem list.

Third, talk us up. If this sounds like a valuable project, then tell your ham friends about it. Come out and visit us some Saturday, and find out first-hand what all the fuss is

about, and then take the message back personally to your clubs! I don't have any statistics, but it's possible that we may be spreading the word about amateur radio to more kids than any other single organization in the world!

I'm not asking you to do more than I am willing to do myself. Each week I spend 2-3 hours on emails and phone calls to coordinate the next weekend's events, 1 hour driving, and 4 hours on board. If one person from each area club did as much in each month as I do every week, my life would be much easier!

No special skills are required. If you want to do the 'Intro to Amateur Radio & Morse code' presentations, it helps if you have at least a little experience doing presentations. We have a script that you can follow, but you are free to do it your own way. You do not have to be a Morse code whiz. You can watch one of the "pros" give the course 1-2 times to see how it flows, and take over doing the presentations yourself when you feel ready.

To demonstrate the VHF equipment, you need a Technician license and at least a bit of operating experience. To demonstrate the HF equipment, you need at least a Tech w/HF license and a bit of operating experience. We will show you everything else you need to know.

Many people have read articles speculating about the future disposition of the USS Salem. People often ask me what's going to happen. The answer is that I don't know, and neither does anyone else at this point. We're all hoping that the USS Salem will continue to provide this excellent learning opportunity for many years to come.

However, what might happen some number of months or years from now is not important to this project in the near-term. Right now we need to take advantage of the opportunity we currently have, and that's why I need your help today!

I'm always sad when I'm forced to cancel the amateur radio activities on board the USS Salem due to a lack of volunteers. I need a larger number of people to participate in this activity so cancellations won't have to happen.

Interesting Web Pages

SkyWarn Classes are being taught locally as this issue goes to press. The Taunton National Weather Service office trains both hams and non-hams to help in the observation of weather. Spotters are needed year round. The training schedule is posted on KD1CY's Web Page:

<http://users.rcn.com/rmacedo/trsched.htm>

Commercial Repeaters were recently taken out-of-service and made available to local ham clubs including the

MMRA. Rich Zach, K1RJZ, provided this link to the story and pictures:

<http://www.bostonusergroups.com/gemoto/wolfpack.htm>

Field Day is next month and it is not too early for planning. Bill Ricker, N1VUX, wrote two web pages about planning for this event and the Incident Command System:

http://www.emaares.com/fd/FD_Scoring_cmts.html
http://www.emaares.com/fd/FD_ICS.html

Public Service Volunteer Opportunities in the New England Division

Listing public events at which Amateur Radio communications is providing a public service and for which additional volunteers from the Amateur Community are needed and welcome. Please contact the person listed to identify how you may serve and what equipment you may need to bring.

The most up-to-date copy of this list is maintained as <http://purl.org/hamradio/publicservice/nediv>

Every event listed is looking for communications volunteers.

<u>Date</u>	<u>Location</u>	<u>Event</u>	<u>Contact</u>	<u>Tel/Email</u>
May 4	Boston	MA Walk for Hunger	Bruce KC1US	781-275-3740 w4h2003@amateur-radio.net
May 18	Devens	MA Parker Classic	Stan KD1LE	978-433-5090 kd1le@arrl.net
June 1	Boston	MA AIDS Walk Boston	Bruce KC1US	781-275-3740 kc1us03@amateur-radio.net
June 8	Wakefield	MA ALA Walk	Bruce KC1US	781-275-3740 kc1us03@amateur-radio.net
Jun 13	Bethel to Farmington ME	ME Bicycle Trek Across Maine	Bill W1LEE	207-624-3044 w1lee@arrl.net
Jun 14	Farmington ME to Waterville ME	ME Bicycle Trek Across Maine	Bill W1LEE	207-624-3044 w1lee@arrl.net
Jun 15	Waterville ME to Belfast ME	ME Bicycle Trek Across Maine	Bill W1LEE	207-624-3044 w1lee@arrl.net
Jun 21	Quincy to Sandwich MA	MA MS Great Mass Getaway	John N1PYN	508-588-3250 n1pyn@arrl.net
Jun 22	Sandwich to Provincetown MA	MA MS Great Mass Getaway	John N1PYN	508-588-3250 n1pyn@arrl.net
Jun 28	Princeton	MA Longsjo Classic Bike Race	Ralph KD1SM	978-582-7351 kd1sm@arrl.net
Jun 29	Fitchburg	MA Longsjo Classic Bike Race	Ralph KD1SM	978-582-7351 kd1sm@arrl.net
Sep 12	Provincetown MA to Dennis MA	MA MS Challenge Walk	John N1PYN	508-588-3250 n1pyn@arrl.net
Sep 13	Dennis to Truro MA	MA MS Challenge Walk	John N1PYN	508-588-3250 n1pyn@arrl.net
Sep 14	Dennis to Brewster MA	MA MS Challenge Walk	John N1PYN	508-588-3250 n1pyn@arrl.net
Sep 21	Madison to Moodus CT	CT Bike Tour for MS	Scott AA1WM	203-676-1016 aa1wm@arrl.net
Sep 22	Moodus to Madison CT	CT Bike Tour for MS	Scott AA1WM	203-676-1016 aa1wm@arrl.net
Oct 17 to 19	Boston	MA Head of the Charles Regatta	Jeff N1FWV	978-536-2842 rwjeffa@attbi.com

This list is published periodically as demand warrants by Stan, KD1LE, and Ralph, KD1SM. Our usual distribution is via packet to NEBBS, via Internet mail to the arrl-nediv-list and ema-arrl distribution lists, and on the World Wide Web (see URL above). If other mailing list owners wish us to distribute via their lists we will be happy to oblige. Permission is herewith granted to republish this list in its entirety provided credit is given to the authors and the URL below is included. Send comments, corrections, and updates to:

(via packet) KD1SM@K1UGM.#EMA.MA.USA,
(via Internet) KD1SM@ARRL.NET.

We make an attempt to confirm entries with the coordinator unless the information is from another published source. We very much appreciate the assistance we have been receiving from our 'scouts'; everyone is welcome to send us postings.

Next Meeting — Wednesday May 21, 2003

KB1IYK: What To Do Until Help Arrives

Note: To accommodate a very full agenda the meeting will start early at 7PM.

MMRA member John Houghton will teach a short first aid course using new materials from the Red Cross. The MMRA will pay the nominal cost for

student materials for each meeting attendee.

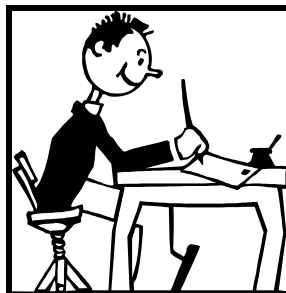
John has offered to teach a more detailed course, including CPR, to MMRA members. The location and timing of this will be determined by the interested MMRA members.

Annual Meeting: Nominations for officers and directors of the MMRA will be accepted at the next meeting. In addition to those from the board, nominations will also be accepted from the floor. Elections to fill the positions will take place immediately after nominations.

Calendar of Ham Radio Events

May 12: FCARA flea, Whately MA
May 18: Flea at MIT, Cambridge MA
May 21: **MMRA elections & meeting**
May 24: NARC flea, Vernon CT
June 1: NARL flea, Newington CT
June 6: HCRA flea, Feeding Hills MA
June 7: FARA flea, Falmouth MA
July 26: FRARC flea, Swansea MA
Aug 20: **MMRA board meeting**
Aug 29: **MMRA Newsletter Deadline**
Sept 14: SEMARA flea, S.Dartmouth MA
Sept 17: **MMRA meeting**

(Flea market info from W1GSL list. <http://mit.edu/w1gsl/Public/ne-fleas>)



MMRA VE Sessions

3rd Saturday of each Month

9 AM at the Marlboro Public Library

Contact: Bill Wade, K1IJ

781-891-9079 Evenings 6 to 10 PM,

Weekends 8 AM to 10 PM.

Accredited by the ARRL VEC

THE MINUTEMAN REPEATER ASSOCIATION

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Email: mmra@mmra.org



WE'RE ON THE WEB!
[HTTP://WWW.MMRA.ORG/](http://www.mmra.org/)
